






# XU GU

Experience  San Francisco, CA  (+1) 415 694-9667  7991luxug@gmail.com  

## CS Department of San Francisco State University

05/2024 – Present

Software Engineer | Python, flask, RAG, Langchain, Supabase, Next.js, MongoDB

San Francisco, United States

- Built a uniformed resume platform MyCareerCoach to help job seekers build their resumes and prepare for their interviews using **Python flask**, **Next.js** and **Supabase**
- Implemented the resume evaluation and feedback feature by designing a feedback factory that returns an apply feedback method. Used **OpenAI GPT** model to evaluate certain sections of the resume, ensuring precise and personalized feedback. Employed asynchronous operations, reducing response time by **30%**.
- Developed a workflow using **Langchain** with **MongoDB** for storing and retrieving vectorized interview questions. This system leverages **retrieval augmented generation (RAG)** and a **multi-agent** approach to generate and refine responses based on user resumes and job descriptions, ensuring high-quality answers through iterative feedback and scoring. Asynchronous processing improved efficiency, reducing response time by **18%**.
- The platform currently has **80+** users and has facilitated the creation of **120+** resumes.

## Tiktok

07/2022 – 07/2023

Software Engineer | Java, MySQL, Mockito, JUnit, RocketMQ, Kafka, Redis, CI, Docker

Beijing, China

- Spearheaded the development test group in developing the integration test framework using TestNG and **Spring Boot**.
- Enhanced testing efficiency and stability, providing support for **80+** developers and integrating **10k+** test cases.
- Optimized the Continuous Integration (**CI**) process in Gitlab Pipelines, streamlining the execution of 30k+ test cases.
- Enhanced **RPC** interactions for **Redis** and **RocketMQ** by simulating operations in local memory and harmonizing data exchanges through **JSON** formatting, streamlining efficiency and standardization.
- Achieved the system success rate over **98%**, and reduced execution time from 40 minutes to under 25 minutes.
- Implemented an advanced offline data comparison **API**, leveraging **multi-threaded asynchronous** operations and **Java thread pools** to automate the identification of discrepancies between HiveSQL results and Crux responses.

## Tiktok

05/2021 – 09/2021

Software Engineer Intern | Python, Flask, Thrift, MySQL, Vue, TypeScript

Shanghai, China

- Developed and integrated the TikTok advertisement monitoring system using **Python**, scanning **400k+** ads to identify unauthorized displays and directly uncovering and solving **3** significant issues, substantially mitigating platform risks.
- Integrated the ad monitoring system into the operational platform, enhancing data analysis and operational efficiency, providing support for **60+** engineers, and reducing the time spent on manual ad discrepancy handling by **30%**.
- Implemented a monitoring RPC service using **Thrift** to automatically check and report invalid advertisements on the TikTok platform, streamlining the process through the message queue.
- Visualized the monitoring results and advertisement audit processes, and developed interactive features for each advertisement using **Vue.js** and **TypeScript**.

## Projects

**Zesty: A recipe website** | Python, Flask, MySQL, AWS, Nginx, uWSGI, Gemini, React.js, TypeScript, Bootstrap

- Led a team of 7 in developing Zesty, a dynamic recipe website, overseeing milestones and code reviews. Implemented **Gemini API** for AI-assisted recipe generation based on user ingredients.

**Scheduling System of a Chemical Experiment Robot** | Java, Spring Boot, Camunda, ZeroMQ, MySQL

- Developed an autonomous scheduling system for chemical experiment robots, enhancing accuracy by **22%**. Managed equipment instructions and data storage, leading to a **published research paper**.

## Education

**San Francisco State University**

08/2023 – 05/2026(Expected)

MS. in Computer Science, GPA: 3.9/4.0

San Francisco, CA

**Nanjing University**

09/2019 – 06/2022

MEng. in Chemical Engineering

Nanjing, China

**Nanjing Normal University**

09/2015 – 06/2019

BEng. in Applied Chemistry

Nanjing, China

**Courses:** Software Engineering, Internet Application Design and Development, Advanced Computer Network, Deep Learning, Data Structures & Algorithms, Computer Networks, Operating System

## Skills

**Languages:** Java, Python, C++, JavaScript/Typescript, HTML/CSS, SQL

**Framework:** Flask, Spring Boot, Apache Thrift, React.js, Next.js, Node.js, Express.js, Bootstrap, TensorFlow

**Technologies:** MySQL, PostgreSQL, Redis, Kafka, MongoDB, Docker, AWS, Nginx, UWSGI, FFmpeg, Langchain, Supabase